

The Human Digestive System

Reference: 338-342

Parts of the human digestive tract and their important features:

The Mouth

The _____ are used for mechanical digestion.

The _____ have papillae (tiny bumps) that contain _____.

The _____ hangs down at the back of the mouth and prevents food from entering the pharynx.

_____ is secreted by 3 _____ glands for the digestion of _____ and for moistening food.

The enzyme _____ breaks down starch into maltose.

The Esophagus

The esophagus is a tube that joins the mouth to the _____.

Food passes over the _____ on its way.

_____ and _____ muscles line the esophagus.

The _____ (or "lower esophageal sphincter") is a ring of muscle that controls the movement of food into the stomach.

Food moves down the esophagus (and other tubes in the digestive system) by a process called _____. This is the rhythmic, wave-like contractions of the muscles that move a bolus of food down the digestive tract.

Note: vomiting is "reverse peristalsis".

The Stomach

A muscular, J-shaped organ, lined with _____ glands that produce and secrete (containing hydrochloric acid and digestive enzymes).

_____ layers of muscles make up the stomach wall. They help the stomach contract which physically breaks up the food and mixes it with _____.

The _____ sphincter at the bottom of the stomach controls movement of _____ (the partially digested liquid food) into the _____.

The Small Intestine

Divided into three sections: the _____, the _____, and the _____.

The _____ is the top section, it is the shortest and widest section (about 30 cm long).

Most of the chemical digestion of food occurs here.

The _____ and _____ ducts empty here, so enzymes and bile can chemically break down food.

The small intestine is lined with many tiny _____-like projections called _____. These are the site of nutrient

_____ into the bloodstream (they are _____ cell thick and are lined with blood capillaries) and they greatly increase

_____ for absorption. (see page 340 for illustrations of villi and microvilli.)

Tiny _____ glands are found between the villi and they secrete intestinal juices.

Lymph vessels absorb _____ particles here.

The _____ is about 2.5 m long and breaks down and absorbs remaining proteins and carb's.

The _____ is about 3m long and absorbs any remaining nutrients.

The Large Intestine

It is about _____ long, but its diameter is _____ than the small intestine.

The _____ is the sac-like first section of the large intestine. The _____ is attached here.

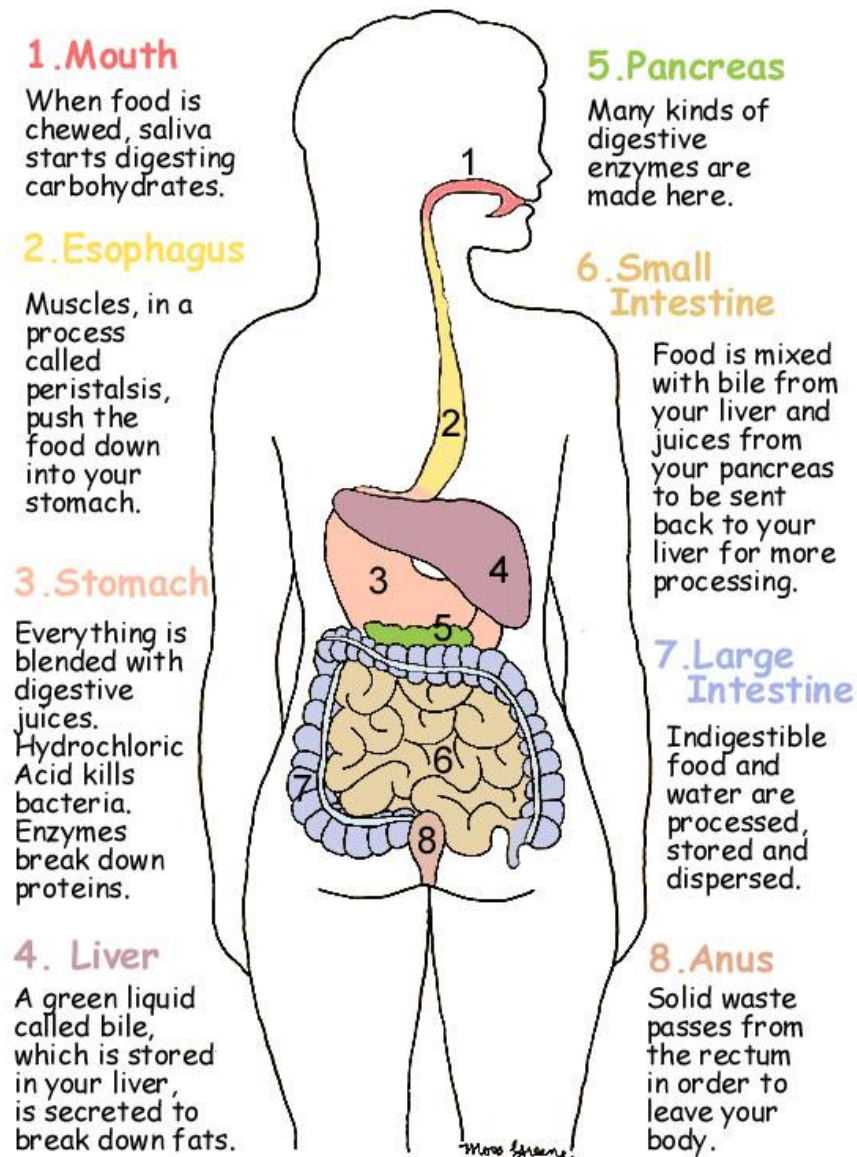
Undigested food passes up, along and down to the _____.

_____ and some minerals are absorbed here.

Only bacteria in the colon carry out any further digestion of the remaining food material.

Note: the bacteria produce by-products such as vitamins B-12 and K and some amino acids.

The _____ (undigestible material) passes into the rectum where it is stored until it is eliminated via the _____.



Answer #'s 3, 4, 5, 9, 10, 12, 13 on page 342.